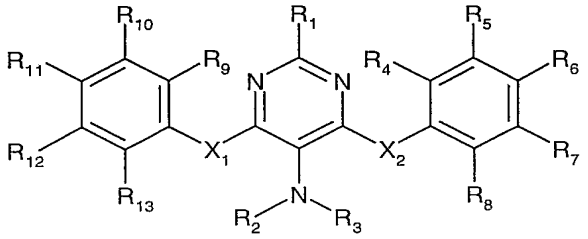
What we claim is:

1. Use of a compound of formula



I,

wherein

R_1 is hydrogen, halogen, cyano, OH, SH, NO_2, COOH, $COOR_2$, $CONH_2$, $CONR_2R_3$, SO_3H, $SO_2NR_2R_3$, C_1-C_6-alkyl, halo-C_1-C_6-alkyl, C_1-C_6-alkoxy, halo-C_1-C_6-alkoxy, C_2-C_6-alkenyl, halo-C_2-C_6-alkenyl, C_2-C_6-alkinyl, C_3-C_6-cycloalkyl, halo-C_3-C_6-cycloalkyl, C_3-C_6-cycloalkyloxy, C_3-C_6-cycloalkylthio, C_2-C_6-alkenyloxy, halo-C_2-C_6-alkenyloxy, C_1-C_6-alkylthio, halo-C_1-C_6-alkylthio, C_1-C_6-alkylsulfonyloxy, halo-C_1-C_6-alkylsulfonyloxy, C_1-C_6-alkylsulfinyl, halo-C_1-C_6-alkylsulfinyl, C_1-C_6-alkylsulfonyl, halo-C_1-C_6-alkylsulfonyl, C_2-C_6-alkenylthio, halo-C_2-C_6-alkenylthio, C_2-C_6-alkenylsulfinyl, halo-C_2-C_6-alkenylsulfinyl, C_2-C_6-alkenylsulfonyl, halo-C_2-C_6-alkenylsulfonyl, NR_2R_3, unsubstituted or one- to five-fold substituted aryl or unsubstituted or substituted hetaryl, the substituents selected from the group consisting of halogen, cyano, OH, SH, NO_2, COOH, $COOR_2$, $CONH_2$, $CONR_2R_3$, SO_3H, $SO_2NR_2R_3$, C_1-C_6-alkyl, halo-C_1-C_6-alkyl, C_1-C_6-alkoxy, halo-C_1-C_6-alkoxy, C_2-C_6-alkenyl, halo-C_2-C_6-alkenyl, C_2-C_6-alkinyl, C_3-C_6-cycloalkyl, halo-C_3-C_6-cycloalkyl, C_3-C_6-cycloalkyloxy, C_3-C_6-cycloalkylthio, C_2-C_6-alkenyloxy, halo-C_2-C_6-alkenyloxy, C_1-C_6-alkylthio, halo-C_1-C_6-alkylthio, C_1-C_6-alkylsulfonyloxy, halo-C_1-C_6-alkylsulfonyloxy, C_1-C_6-alkylsulfinyl, halo-C_1-C_6-alkylsulfinyl, C_1-C_6-alkylsulfonyl, halo-C_1-C_6-alkylsulfonyl, C_2-C_6-alkenylthio, halo-C_2-C_6-alkenylthio, C_2-C_6-alkenylsulfinyl, halo-C_2-C_6-alkenylsulfinyl, C_2-C_6-alkenylsulfonyl, halo-C_2-C_6-alkenylsulfonyl and NR_2R_3;

R_2 and R_3, independently of one another, signify hydrogen, C_1-C_6-alkyl, halo-C_1-C_6-alkyl, formyl, C_1-C_6-alkylcarbonyl, halo-C_1-C_6-alkylcarbonyl, C_1-C_6-alkoxycarbonyl, halo-C_1-C_6-alkoxycarbonyl, C_1-C_6-alkylaminocarbonyl, di-C_1-C_6-alkylaminocarbonyl or unsubstituted or one- to five-fold substituted benzyl, the substituents selected from the group consisting of halogen, cyano, OH, SH, NO_2, COOH, $COOR_2$, $CONH_2$, $CONR_2R_3$, SO_3H, $SO_2NR_2R_3$, C_1-C_6-alkyl, halo-C_1-C_6-alkyl, C_1-C_6-alkoxy, halo-C_1-C_6-alkoxy, C_2-C_6-alkenyl, halo-C_2-C_6-alkenyl, C_2-C_6-alkinyl, C_3-C_6-cycloalkyl, halo-C_3-C_6-cycloalkyl, C_3-C_6-cycloalkyloxy, C_3-C_6-cycloalkylthio, C_2-C_6-alkenyloxy, halo-C_2-C_6-alkenyloxy, C_1-C_6-alkylthio, halo-C_1-C_6-alkylthio,

C_1-C_6-alkylsulfonyloxy, halo-C_1-C_6-alkylsulfonyloxy, C_1-C_6-alkylsulfinyl, halo-C_1-C_6-alkylsulfinyl, C_1-C_6-alkylsulfonyl, halo-C_1-C_6-alkylsulfonyl, C_2-C_6-alkenylthio, halo-C_2-C_6-alkenylthio, C_2-C_6-alkenylsulfinyl, halo-C_2-C_6-alkenylsulfinyl, C_2-C_6-alkenylsulfonyl and halo-C_2-C_6-alkenylsulfonyl;

R_4, R_5, R_6, R_7, R_8, R_9, R_{10}, R_{11}, R_{12} and R_{13}, independently of one another, are hydrogen, halogen, cyano, nitro, OH, SH, NO_2, COOH, $COOR_2$, $CONH_2$, $CONR_2R_3$, SO_3H, $SO_2NR_2R_3$, C_1-C_6-alkyl, halo-C_1-C_6-alkyl, C_1-C_6-alkoxy, halo-C_1-C_6-alkoxy, C_2-C_6-alkenyl, halo-C_2-C_6-alkenyl, C_2-C_6-alkinyl, C_3-C_6-cycloalkyl, C_2-C_6-alkenyloxy, halo-C_2-C_6-alkenyloxy, C_1-C_6-alkylthio, halo-C_1-C_6-alkylthio, C_1-C_6-alkylsulfonyloxy, halo-C_1-C_6-alkylsulfonyloxy, C_1-C_6-alkylsulfinyl, halo-C_1-C_6-alkylsulfinyl, C_1-C_6-alkylsulfonyl, halo-C_1-C_6-alkylsulfonyl, C_2-C_6-alkenylthio, halo-C_2-C_6-alkenylthio, C_2-C_6-alkenylsulfinyl, halo-C_2-C_6-alkenylsulfinyl, C_2-C_6-alkenylsulfonyl, halo-C_2-C_6-alkenylsulfonyl, C_1-C_6-alkylamino, di-C_1-C_6-alkylamino, C_1-C_6-alkylsulfonylamino, halo-C_1-C_6-alkylsulfonylamino, C_1-C_6-alkylcarbonyl, halo-C_1-C_6-alkylcarbonyl, C_1-C_6-alkoxycarbonyl, C_1-C_6-alkylaminocarbonyl, di-C_1-C_6-alkylaminocarbonyl, or unsubstituted or one- to five-fold substituted aryl or unsubstituted or substituted hetaryl, the substituents selected from the group consisting of halogen, cyano, OH, SH, NO_2, COOH, $COOR_2$, $CONH_2$, $CONR_2R_3$, SO_3H, $SO_2NR_2R_3$, C_1-C_6-alkyl, halo-C_1-C_6-alkyl, C_1-C_6-alkoxy, halo-C_1-C_6-alkoxy, C_2-C_6-alkenyl, halo-C_2-C_6-alkenyl, C_2-C_6-alkinyl, C_3-C_6-cycloalkyl, halo-C_3-C_6-cycloalkyl, C_3-C_6-cycloalkyloxy, C_3-C_6-cycloalkylthio, C_2-C_6-alkenyloxy, halo-C_2-C_6-alkenyloxy, C_1-C_6-alkylthio, halo-C_1-C_6-alkylthio, C_1-C_6-alkylsulfonyloxy, halo-C_1-C_6-alkylsulfonyloxy, C_1-C_6-alkylsulfinyl, halo-C_1-C_6-alkylsulfinyl, C_1-C_6-alkylsulfonyl, halo-C_1-C_6-alkylsulfonyl, C_2-C_6-alkenylthio, halo-C_2-C_6-alkenylthio, C_2-C_6-alkenylsulfinyl, halo-C_2-C_6-alkenylsulfinyl, C_2-C_6-alkenylsulfonyl, halo-C_2-C_6-alkenylsulfonyl and NR_2R_3;

X_1 and X_2, independently of one another, are $C(R_{14})(R_{15})$, NR_{14}, O, S, SO or SO_2; and

R_{14} and R_{15}, independently of one another, signify hydrogen, C_1-C_6-alkyl, formyl, C_1-C_6-alkylcarbonyl or halo-C_1-C_6-alkylcarbonyl;

in the control of ectoparasites on animals.

2. Use of a compound of formula according to claim 1, wherein
R_1 is hydrogen, halogen, NO_2, C_1-C_6-alkyl, halo-C_1-C_6-alkyl, C_1-C_6-alkoxy, halo-C_1-C_6-alkoxy, C_3-C_6-cycloalkyl, halo-C_3-C_6-cycloalkyl, C_3-C_6-cycloalkyloxy, C_3-C_6-cycloalkylthio, C_1-C_6-alkylthio or halo-C_1-C_6-alkylthio.

3. Use of a compound of formula according to claim 1, wherein

R_1 is hydrogen, halogen, NO_2, C_1-C_6-alkyl, halo-C_1-C_6-alkyl, C_1-C_6-alkoxy or halo-C_1-C_6-alkoxy.

4. Use of a compound of formula according to claim 1, wherein
R_1 is hydrogen, C_1-C_6-alkyl or C_1-C_6-alkoxy.

5. Use of a compound of formula according to claim 1, wherein
R_2 and R_3, independently of one another, signify hydrogen, C_1-C_6-alkyl, formyl, C_1-C_6-alkylcarbonyl, C_1-C_6-alkoxycarbonyl, C_1-C_6-alkylaminocarbonyl, di-C_1-C_6-alkylaminocarbonyl or unsubstituted or one- to five-fold substituted benzyl, the substituents selected from the group consisting of halogen, cyano, OH, SH, NO_2, COOH, $COOR_2$, $CONH_2$, $CONR_2R_3$, SO_3H, $SO_2NR_2R_3$, C_1-C_6-alkyl, halo-C_1-C_6-alkyl, C_1-C_6-alkoxy, halo-C_1-C_6-alkoxy, C_2-C_6-alkenyl, halo-C_2-C_6-alkenyl, C_2-C_6-alkinyl, C_3-C_6-cycloalkyl, halo-C_3-C_6-cycloalkyl, C_3-C_6-cycloalkyloxy, C_3-C_6-cycloalkylthio, C_2-C_6-alkenyloxy, halo-C_2-C_6-alkenyloxy, C_1-C_6-alkylthio, halo-C_1-C_6-alkylthio, C_1-C_6-alkylsulfonyloxy, halo-C_1-C_6-alkylsulfonyloxy, C_1-C_6-alkylsulfinyl, halo-C_1-C_6-alkylsulfinyl, C_1-C_6-alkylsulfonyl, halo-C_1-C_6-alkylsulfonyl, C_2-C_6-alkenylthio, halo-C_2-C_6-alkenylthio, C_2-C_6-alkenylsulfinyl, halo-C_2-C_6-alkenylsulfinyl, C_2-C_6-alkenylsulfonyl and halo-C_2-C_6-alkenylsulfonyl.

6. Use of a compound of formula according to claim 1, wherein
R_2 and R_3, independently of one another, signify hydrogen, C_1-C_4-alkyl, formyl, C_1-C_4-alkylcarbonyl or benzyl.

7. Use of a compound of formula according to claim 1, wherein
R_2 and R_3, independently of one another, signify hydrogen, C_1-C_2-alkyl, benzyl or formyl.

8. Use of a compound of formula according to claim 1, wherein
R_4, R_5, R_6, R_7, R_8, R_9, R_{10}, R_{11}, R_{12} and R_{13}, independently of one another, are hydrogen, halogen, cyano, nitro, C_1-C_6-alkyl, halo-C_1-C_6-alkyl, C_1-C_6-alkoxy, halo-C_1-C_6-alkoxy, C_3-C_6-cycloalkyl, C_1-C_6-alkylthio, halo-C_1-C_6-alkylthio or unsubstituted or one- to five-fold substituted aryl or unsubstituted or substituted hetaryl, the substituents selected from the group consisting of halogen, cyano, OH, SH, NO_2, COOH, $COOR_2$, $CONH_2$, $CONR_2R_3$, SO_3H, $SO_2NR_2R_3$, C_1-C_6-alkyl, halo-C_1-C_6-alkyl, C_1-C_6-alkoxy, halo-C_1-C_6-alkoxy, C_2-C_6-alkenyl, halo-C_2-C_6-alkenyl, C_2-C_6-alkinyl, C_3-C_6-cycloalkyl, halo-C_3-C_6-cycloalkyl, C_3-C_6-cycloalkyloxy, C_3-C_6-cycloalkylthio, C_2-C_6-alkenyloxy, halo-C_2-C_6-alkenyloxy, C_1-C_6-alkylthio, halo-C_1-C_6-alkylthio, C_1-C_6-alkylsulfonyloxy, halo-C_1-C_6-alkylsulfonyloxy, C_1-C_6-alkylsulfinyl, halo-C_1-C_6-alkylsulfinyl, C_1-C_6-alkylsulfonyl, halo-C_1-C_6-alkylsulfonyl, C_2-C_6-alkenylthio, halo-

C_2-C_6-alkenylthio, C_2-C_6-alkenylsulfinyl, halo-C_2-C_6-alkenylsulfinyl, C_2-C_6-alkenylsulfonyl, halo-C_2-C_6-alkenylsulfonyl and NR_2R_3.

9. Use of a compound of formula according to claim 1, wherein
R_4, R_5, R_6, R_7, R_8, R_9, R_{10}, R_{11}, R_{12} and R_{13}, independently of one another, are hydrogen, halogen, nitro, C_1-C_4-alkyl, halo-C_1-C_4-alkyl, C_1-C_4-alkoxy or halo-C_1-C_4-alkoxy.

10. Use of a compound of formula according to claim 1, wherein
R_4, R_5, R_6, R_7, R_8, R_9, R_{10}, R_{11}, R_{12} and R_{13}, independently of one another, are hydrogen, halogen, nitro, C_1-C_2-alkyl or halo-C_1-C_2-alkyl.

11. Use of a compound of formula according to claim 1, wherein
R_4, R_5, R_6, R_7, R_8, R_9, R_{10}, R_{11}, R_{12} and R_{13}, independently of one another, are hydrogen, halogen, nitro or CF_3.

12. Use of a compound of formula according to claim 1, wherein
X_1 and X_2, independently of one another, are NR_{14}, O or S.

13. Use of a compound of formula according to claim 1, wherein
X_1 and X_2, independently of one another, are NH, O or S.

14. Use of a compound of formula according to claim 1, wherein
X_1 and X_2 are O.

15. Use of a compound of formula according to claim 1, wherein
R_{14} and R_{15}, independently of one another, signify hydrogen, C_1-C_4-alkyl, formyl, C_1-C_4-alkylcarbonyl.

16. Use of a compound of formula according to claim 1, wherein
R_{14} and R_{15}, independently of one another, signify hydrogen or C_1-C_4-alkyl.

17. Use of a compound of formula according to claim 1, wherein
R_{14} and R_{15} signify hydrogen.

18. Use of a compound of formula according to claim 1, wherein
R_1 is hydrogen, halogen, NO_2, C_1-C_6-alkyl, halo-C_1-C_6-alkyl, C_1-C_6-alkoxy, halo-C_1-C_6-alkoxy, C_3-C_6-cycloalkyl, halo-C_3-C_6-cycloalkyl, C_3-C_6-cycloalkyloxy, C_3-C_6-cycloalkylthio, C_1-C_6-alkylthio or halo-C_1-C_6-alkylthio;

R_2 and R_3, independently of one another, signify hydrogen, C_1-C_6-alkyl, formyl, C_1-C_6-alkylcarbonyl, C_1-C_6-alkoxycarbonyl, C_1-C_6-alkylaminocarbonyl, di-C_1-C_6-alkylaminocarbonyl or benzyl;

R_4, R_5, R_6, R_7, R_8, R_9, R_{10}, R_{11}, R_{12} and R_{13}, independently of one another, are hydrogen, halogen, cyano, nitro, C_1-C_6-alkyl, halo-C_1-C_6-alkyl, C_1-C_6-alkoxy, halo-C_1-C_6-alkoxy, C_3-C_6-cycloalkyl, C_1-C_6-alkylthio, halo-C_1-C_6-alkylthio or unsubstituted or one- to five-fold substituted aryl or unsubstituted or substituted hetaryl, the substituents selected from the group consisting of halogen, cyano, OH, SH, NO_2, COOH, $COOR_2$, $CONH_2$, $CONR_2R_3$, SO_3H, $SO_2NR_2R_3$, C_1-C_6-alkyl, halo-C_1-C_6-alkyl, C_1-C_6-alkoxy, halo-C_1-C_6-alkoxy, C_2-C_6-alkenyl, halo-C_2-C_6-alkenyl, C_2-C_6-alkinyl, C_3-C_6-cycloalkyl, halo-C_3-C_6-cycloalkyl, C_3-C_6-cycloalkyloxy, C_3-C_6-cycloalkylthio, C_2-C_6-alkenyloxy, halo-C_2-C_6-alkenyloxy, C_1-C_6-alkylthio, halo-C_1-C_6-alkylthio, C_1-C_6-alkylsulfonyloxy, halo-C_1-C_6-alkylsulfonyloxy, C_1-C_6-alkylsulfinyl, halo-C_1-C_6-alkylsulfinyl, C_1-C_6-alkylsulfonyl, halo-C_1-C_6-alkylsulfonyl, C_2-C_6-alkenylthio, halo-C_2-C_6-alkenylthio, C_2-C_6-alkenylsulfinyl, halo-C_2-C_6-alkenylsulfinyl, C_2-C_6-alkenylsulfonyl, halo-C_2-C_6-alkenylsulfonyl and NR_2R_3;

X_1 and X_2, independently of one another, are NR_{14}, O or S; and

R_{14} signifies hydrogen, C_1-C_4-alkyl, formyl, C_1-C_4-alkylcarbonyl.

19. Use of a compound of formula according to claim 1, wherein
R_1 is hydrogen, halogen, NO_2, C_1-C_6-alkyl, halo-C_1-C_6-alkyl, C_1-C_6-alkoxy or halo-C_1-C_6-alkoxy;

R_2 and R_3, independently of one another, signify hydrogen, C_1-C_4-alkyl, formyl, C_1-C_4-alkylcarbonyl or benzyl;

R_4, R_5, R_6, R_7, R_8, R_9, R_{10}, R_{11}, R_{12} and R_{13}, independently of one another, are hydrogen, halogen, nitro, C_1-C_4-alkyl, halo-C_1-C_4-alkyl, C_1-C_4-alkoxy or halo-C_1-C_4-alkoxy; and

X_1 and X_2, independently of one another, are NH, O or S.

20. Use of a compound of formula according to claim 1, wherein
R_1 is hydrogen, C_1-C_6-alkyl or C_1-C_6-alkoxy;

R_2 and R_3, independently of one another, signify hydrogen, C_1-C_2-alkyl, formyl or benzyl;

R_4, R_5, R_6, R_7, R_8, R_9, R_{10}, R_{11}, R_{12} and R_{13}, independently of one another, are hydrogen, halogen, nitro, C_1-C_2-alkyl or halo-C_1-C_2-alkyl; and

X_1 and X_2 are O.

21. Use of a compound of formula according to claim 1, wherein
R_1 is hydrogen, C_1-C_6-alkyl or C_1-C_6-alkoxy;

R_2 and R_3, independently of one another, signify hydrogen, C_1-C_2-alkyl, formyl or benzyl;

R_4, R_5, R_6, R_7, R_8, R_9, R_{10}, R_{11}, R_{12} and R_{13}, independently of one another, are hydrogen, halogen, nitro or CF_3; and

X_1 and X_2 are O.

22. Ectoparasiticidal composition comprising a compound of the formula I as defined in any one of claims 1 to 20 and a physiologically acceptable carrier and/or dispersant.

23. Ectoparasiticidal composition according to claim 22 consisting of a pour-on or spot-on formulation.

24. Method of controlling ectoparasites, whereby an effective amount of at least one compound of formula I according to claim 1 is administered to the habitat of the parasites.

25. Use of a compound of the formula I as defined in any one of claims 1 to 21 for the preparation of an ectoparasiticidal composition according to claim 22.

26. Compound of the formula I as defined in any one of claims 1 to 21 for the use in the treatment of ectoparasites on non-human animals.